

CLAIMS

1. Pump (1) comprising at least one shield valve controlled by a conveyed medium and which has a valve disk (4) of flexible material, which is clamped in a central region and is movable between an open position and a closed position, in said closed position the valve disk (4) closes at least one valve opening (9), **wherein** extensions (11) project from the valve disk (4) in step form for preventing a sudden flat abutment of the valve disk on a valve abutment surface and/or for limiting a valve opening motion and wherein the valve disk (4) is connected by at least one of the step-shaped extensions (11) to a sealing ring (13) surrounding the valve disk (4) and clamped between two housing portions (5, 6).
2. Pump according to claim 1, wherein the plurality of extensions (11) project generally uniformly from a peripheral edge of the disk.
3. Pump according to claim 1, wherein the valve abutment surface (10) has an approximately conical shape.
4. Pump according to claim 1, wherein a central region of the valve disk (4) is centered by a pin (7) which passes through a central perforation (8) of the valve disk (4).
5. Pump according to claim 1, wherein the at least one extension (11) connecting the valve disk (4) and the sealing ring (13) extends at least sectionally transversely to the disk radius and runs in a spiral form.

SMB-PT123
(PC03 200BUS)

6. Pump according to claim 1, wherein at least one gap (14) acting as a passage opening is provided between the sealing ring (13) and the valve disk (4).